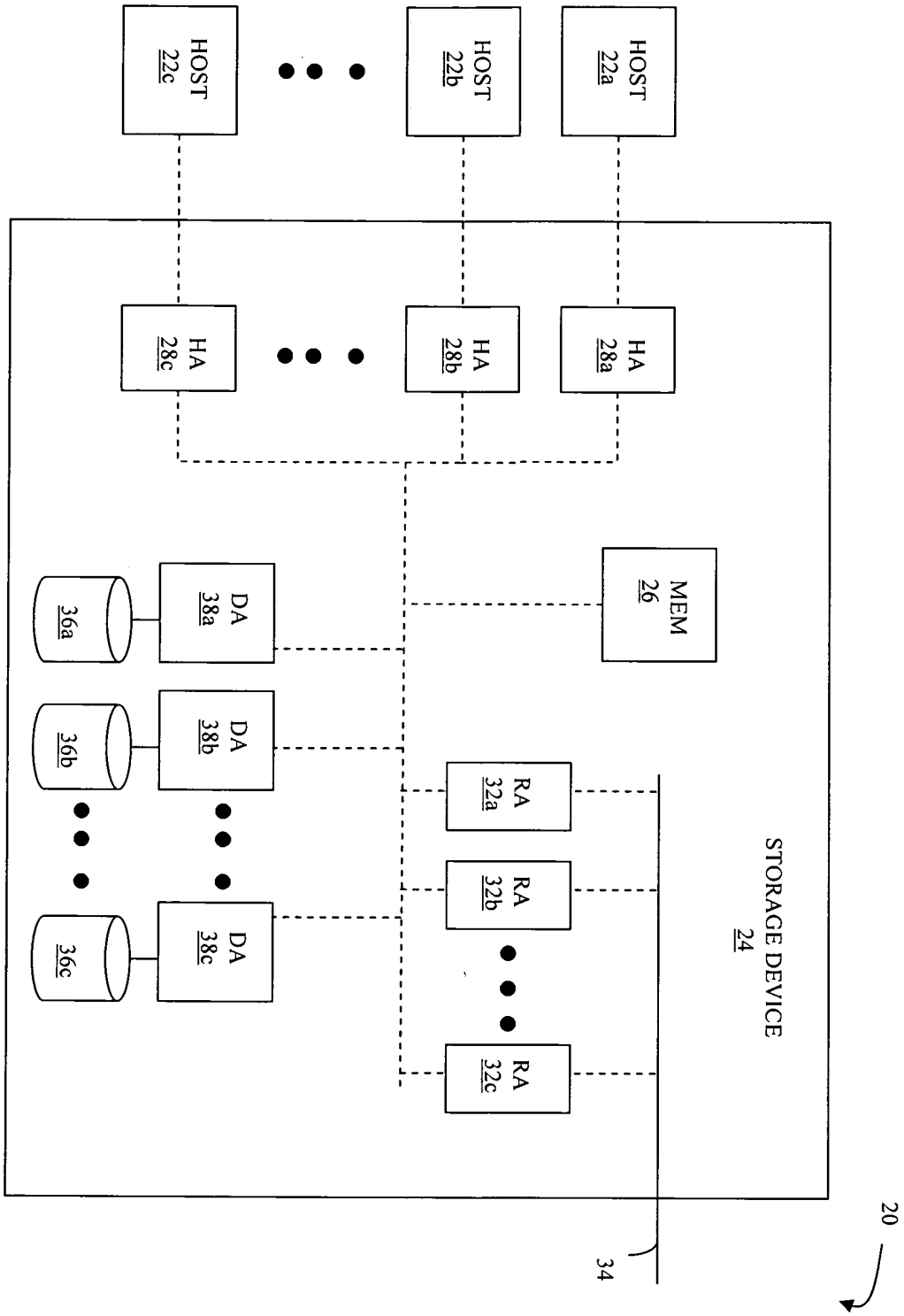

HOST 22a
HOST 22b
HOST 22c
HA 28a
HA 28b
HA 28c
MEM 26
DA 38a
DA 38b
DA 38c
36a
36b
36c
RA 32a
RA 32b
RA 32c
STORAGE DEVICE 24
34
20

FIGURE 1

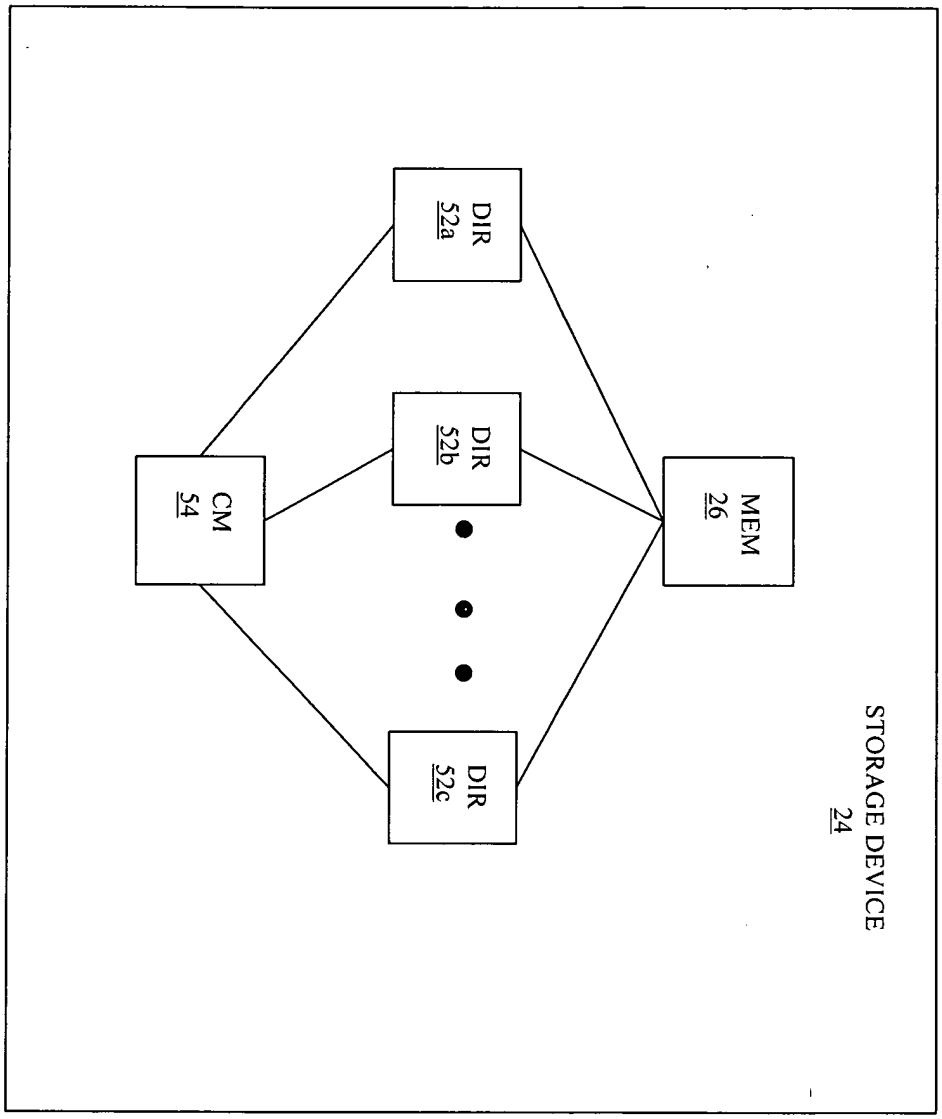


FIGURE 2

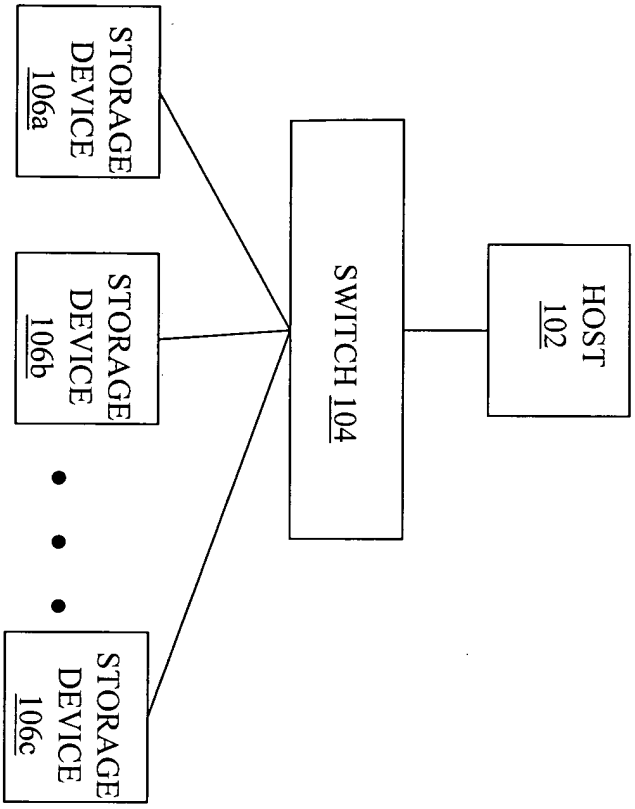


FIGURE 3

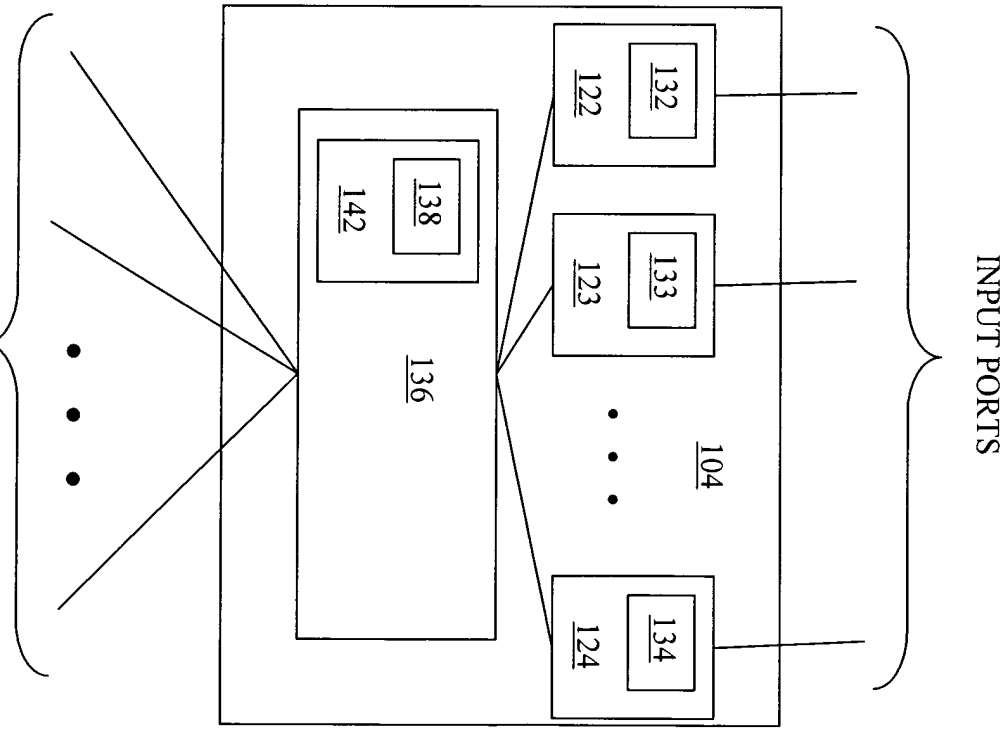


FIGURE 4

FIGURE 5

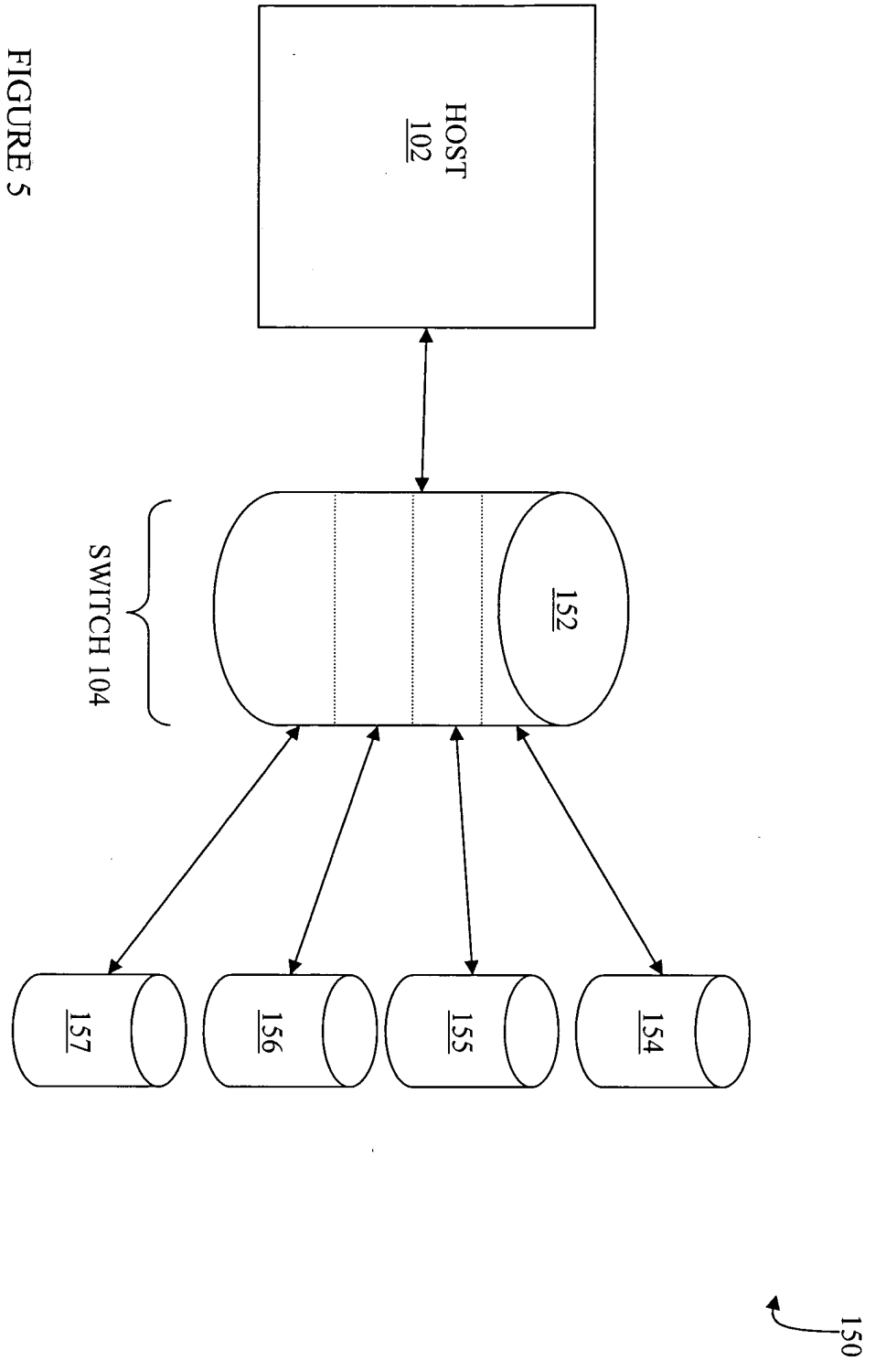

HOST
102
SWITCH 104
152
157
156
155
154
STORAGE DEVICES
106a-106c
150

FIGURE 6

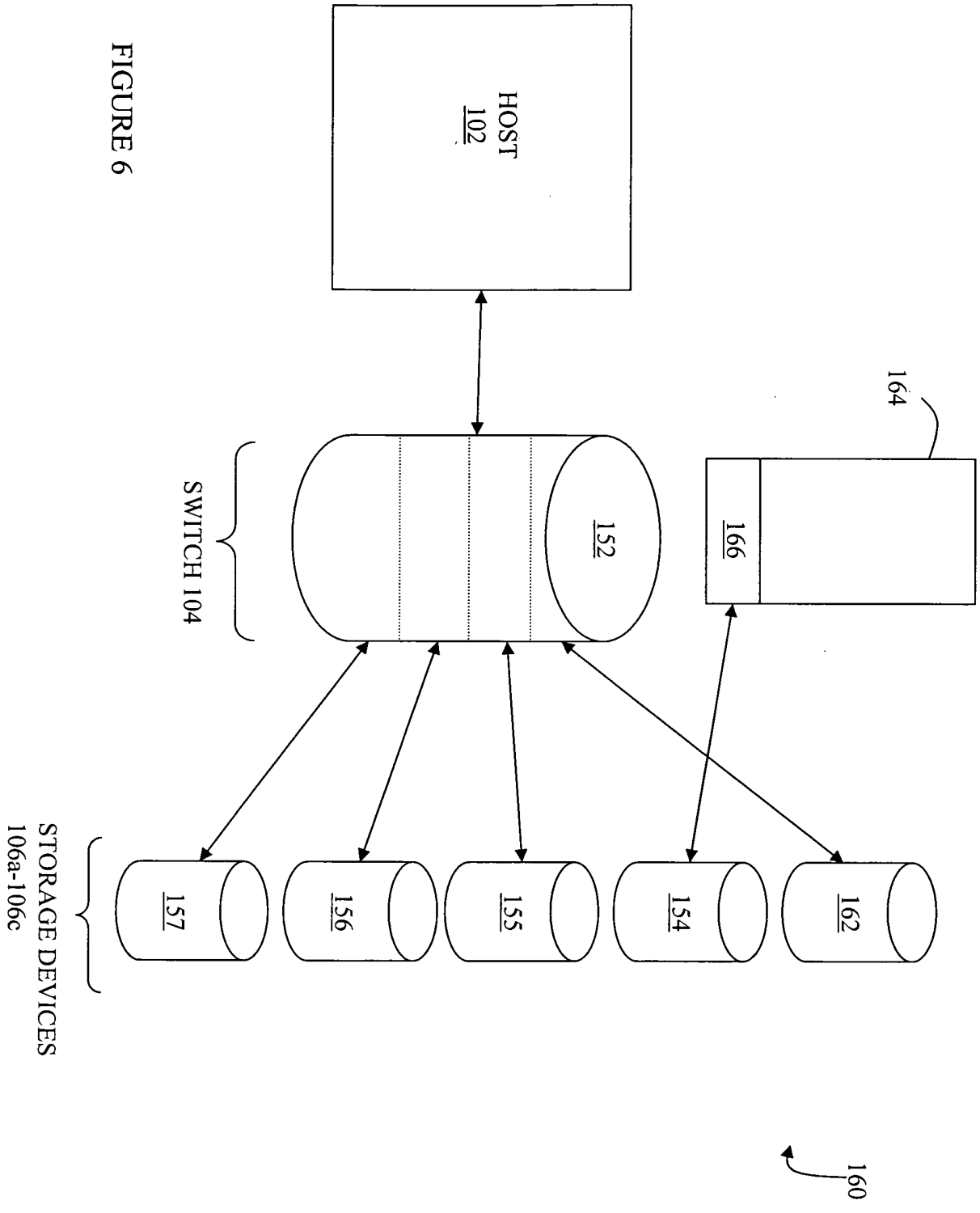
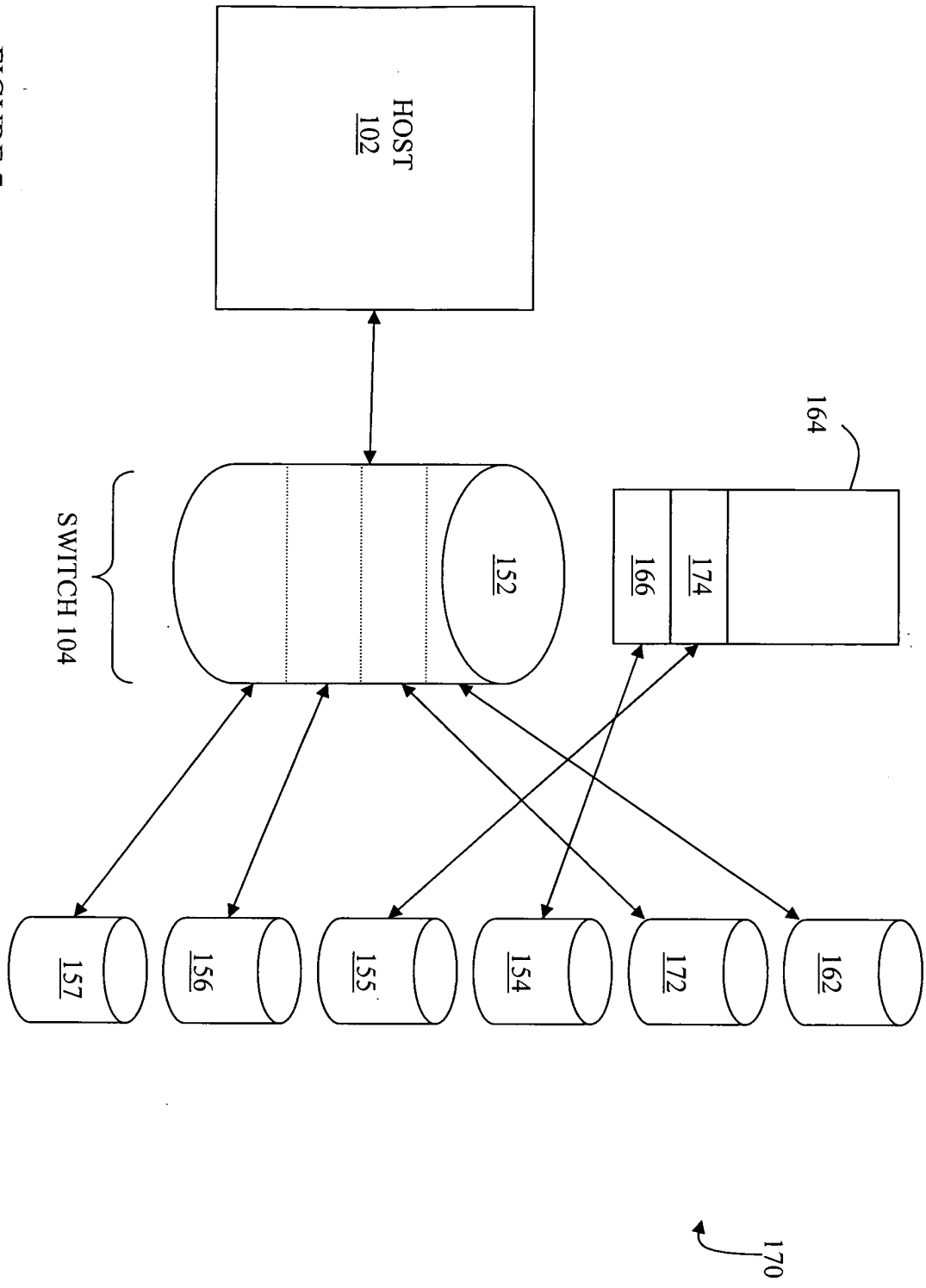

HOST
102
164
166
SWITCH 104
152
157
156
155
154
162
STORAGE DEVICES
106a-106c
160

FIGURE 7


HOST
102
164
SWITCH 104
152
166
174
157
156
155
154
172
162
STORAGE DEVICES
106a-106c
170

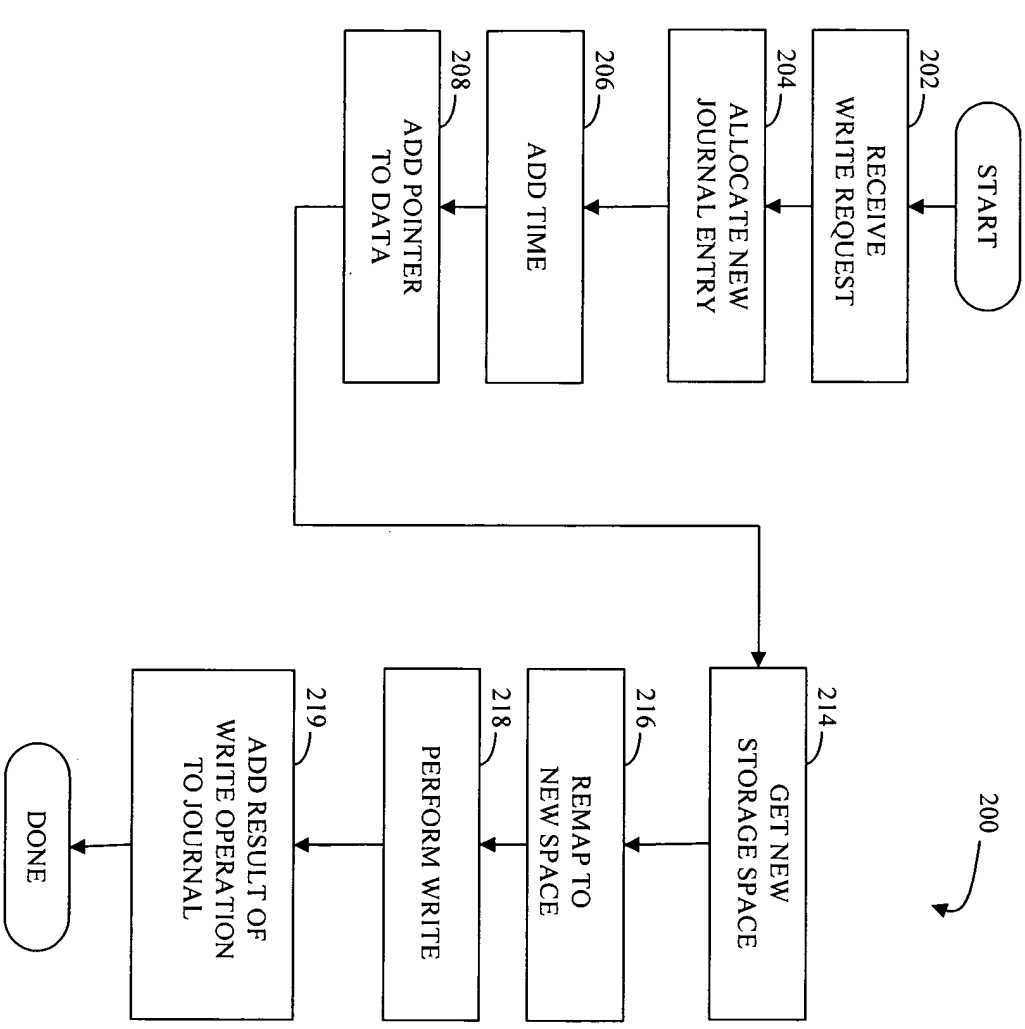

START
202
RECEIVE WRITE REQUEST
204
ALLOCATE NEW JOURNAL ENTRY
206
ADD TIME
208
ADD POINTER TO DATA
214
GET NEW STORAGE SPACE
216
REMAP TO NEW SPACE
218
PERFORM WRITE
219
ADD RESULT OF WRITE OPERATION TO JOURNAL
DONE
200

FIGURE 8

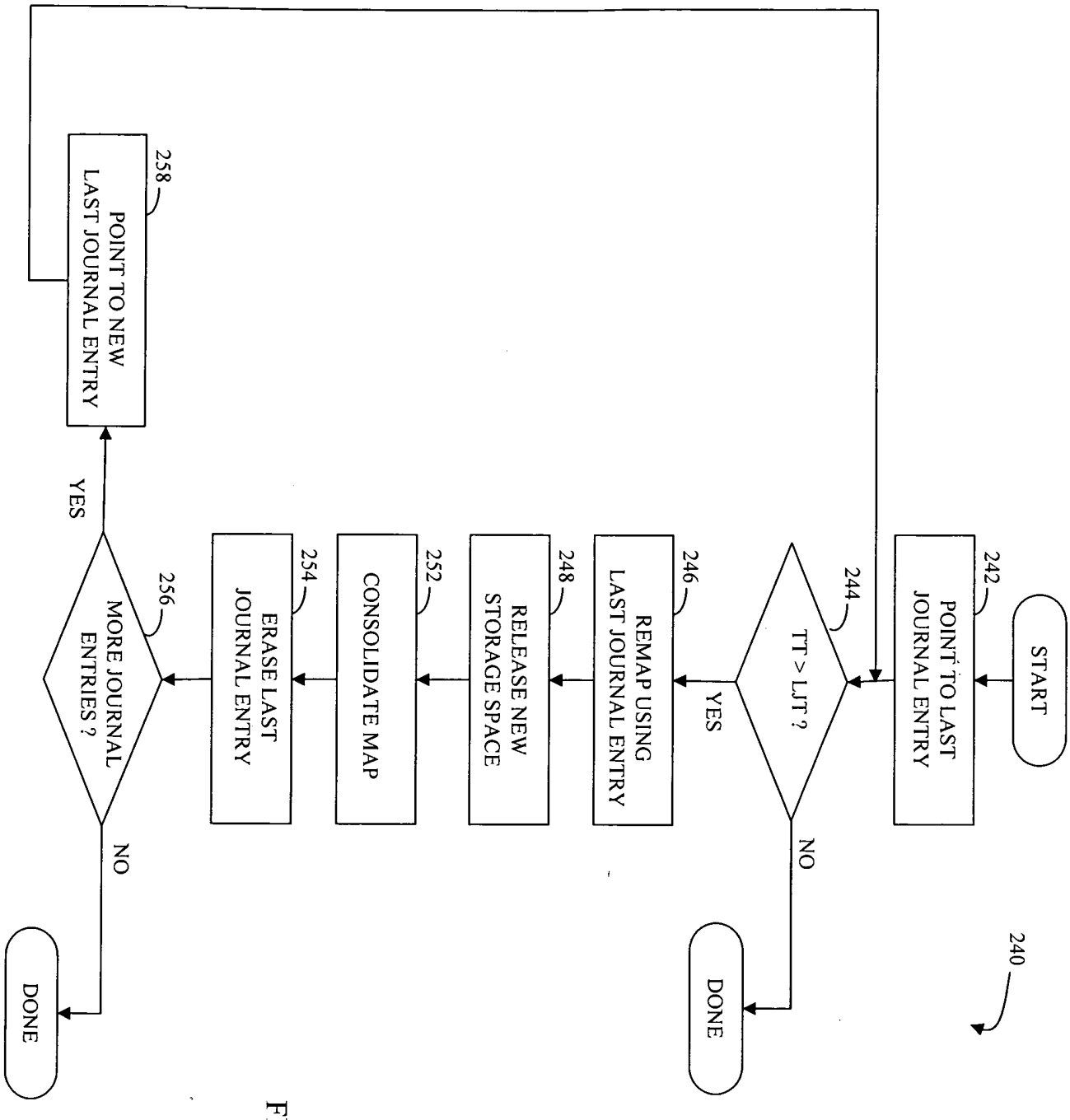

START
POINT TO LAST JOURNAL ENTRY
242
TT > LJT ?
244
YES
NO
REMAP USING LAST JOURNAL ENTRY
246
RELEASE NEW STORAGE SPACE
248
CONSOLIDATE MAP
252
ERASE LAST JOURNAL ENTRY
254
MORE JOURNAL ENTRIES ?
256
YES
NO
POINT TO NEW LAST JOURNAL ENTRY
258
DONE
DONE
240

FIGURE 9

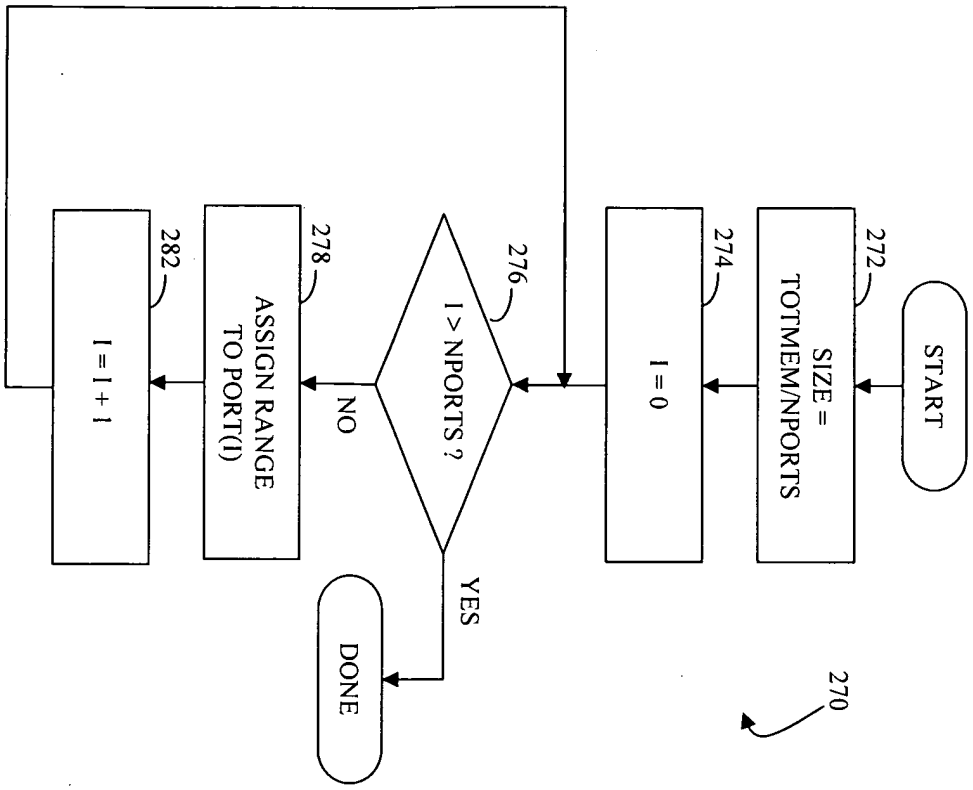


FIGURE 10

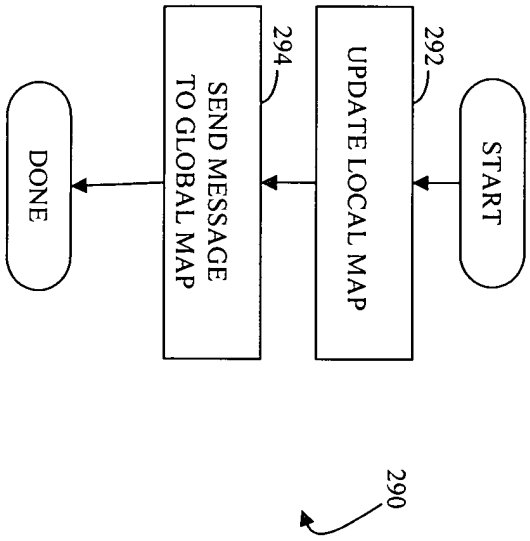


FIGURE 11